

Tantramar Climate Change Adaptation Collaborative



Tantramar Climate Change Adaptation Collaborative 5 Year Action Plan 2017-2022 Updated January 2017

Action	Lead and Partners	Timeline	Progress/Completion
Planning and Policy			
Goal: To advance climate change adaptation planning and policies at the regional level			
Renew interprovincial strategy, policies, agreements, plans	NB and NS governments and federal government to collaborate on the Chignecto Isthmus	2017	Ongoing
NB provincial policy and regulations	<ul style="list-style-type: none"> • ENGOS • Gov. staff • Regional Service Commissions • Municipalities • Insurance Bureau of Canada 	Began 2013	Ongoing
Municipal planning for climate change -Climate change adaptation will be incorporated in updated municipal plans	<ul style="list-style-type: none"> • Municipal councils • Planning authorities (South East Planning Commission) • Municipal engineering depts. • Researchers • Community groups • ENGOS 	Began early 2013	<p>The Sackville municipal plan process was completed winter 2016</p> <p>Port Elgin Community-Based Adaptation Plan Completed February 2016</p> <p>Sackville Corporate Adaptation Plan completed in April 2016</p> <p>Dorchester Community-Based Adaptation Plan set to be completed March 2017</p>
Start regional planning on climate change	<ul style="list-style-type: none"> • Regional Service Commission NB 	Start 2013	Ongoing

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	<ul style="list-style-type: none"> • EMOS • Planning Review Committee • NGOs • Community groups 		
Identify levels of government responsibilities	<ul style="list-style-type: none"> • Universities • ENGOs • Emergency management 	Early 2013	
Human resource capacity is needed to inform the public and build awareness (a sustainable development mandate should be built into the role of currently-existing Sackville Ec. Dev. Officer)	<ul style="list-style-type: none"> • Town of Sackville 	Start mid 2013	Ongoing
Increase political support (how to engage politicians, information and awareness of the issues, ID key political players, concerns for public safety, present cost-benefit analysis or cost of doing “nothing”, use past examples to compel politicians)	<ul style="list-style-type: none"> • Public • Education institutions • NGOs • EMO 	Start early 2013	Ongoing. Some local political leaders attended November 15 th public information session on flooding hosted by the Collaborative and February 2016 technical session on flooding.
Explore options, adaptation planning, how to frame the message and issues, etc.	<ul style="list-style-type: none"> • David Lieske 	Ongoing	Public outreach and education activities ongoing by EOS and members of the Collaborative including public information session, information booths, etc.
<p>Added January 2014 for the 2014/15 year:</p> <ul style="list-style-type: none"> • Not to make the problems worse! • Follow a long-term vision with incentive programs • Discourage (but not forbid) bad developments and encourage good ones • Collect do-able things for the region (eg. rain gardens, bylaws, policy ideas) 	<ul style="list-style-type: none"> • South East Region Service Commission 	2014 onwards	<p>Sackville’s municipal plan is was updated winter 2016.</p> <p>9 rain gardens now planted across Tantramar by RCE and EOS, plus 5 by homeowners (total is 14)</p>

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Consider municipal implications of the new provincial climate change action plans	<ul style="list-style-type: none"> Collaborative working group and local municipalities 	2017-2018	
Consider implications of NB climate action plan on Tantramar Collaborative	<ul style="list-style-type: none"> Collaborative working group 	2017-2018	
NB/NS Provincial policy statements need political pressure for adoption of PSI	<ul style="list-style-type: none"> NB and NS government representatives on Collaborative Municipalities, NGOs, public Collaborative working group 	2017 and beyond	
NS and SERSC community adaptation plans being incorporated into plans and regulations	<ul style="list-style-type: none"> NB and NS Municipalities Regional Service Commissions 	Ongoing	
Municipal capacity and authority on climate change action plans (CCAP) needs to be a priority and integrated into all program	<ul style="list-style-type: none"> Municipalities 	2017 and beyond	
Municipal CCAP implemented into regulations and enforced including long-term visioning of scenarios	<ul style="list-style-type: none"> Collaborative and member municipalities 	2017 and beyond	
Share research, involve research partners in the Collaborative (eg. Blue Zone work of SERSC)	<ul style="list-style-type: none"> Regional Service Commission Cumberland and Amherst planners 	2017 and beyond	
Infrastructure (including dykes and natural infrastructure)			
Goal: To maintain and improve infrastructure at the regional level			
Categorize dykes (look at land uses behind the dyke, critical areas, etc).	NB DTI and NS Agriculture	Early 2013	Categories have been selected
Transition plan based on categories	<ul style="list-style-type: none"> Stakeholders 	2014	Ongoing
Identify stakeholders	NB, NS, municipalities, CN, farmers, gov. agencies, etc	Early 2013	Ongoing
Create standards specific to categories based on crop land, public safety, transportation, infrastructure, etc)	Stakeholders	Early 2014	Ongoing
Identify critical areas	<ul style="list-style-type: none"> NS Dept of Agriculture NB Dept of Transportation and Infrastructure Planning Commission James Bornemann (lead) 	Begin early 2014	(David Lieske's new interactive viewer map could be used by the department to ID vulnerable areas)

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Integrate infrastructure roles and authority over dykes (who should have authority since it is more than an agricultural issue now)	Identified stakeholders (NB, NS, municipalities, CN, farmers, gov. agencies, etc)	Begin early 2013	In NB dyke maintenance will be moving to the Department of Transportation and infrastructure in April 2016.
<p>Added January 2014 for 2014/15 year:</p> <ul style="list-style-type: none"> • Educate the public about the state of the dykes, and the mandate of the Department of Agriculture. • The Collaborative and the public need to lobby the government of New Brunswick to spend more money on dyke maintenance. (Working Group) • Continue to maintain the dykes. (Department of Agriculture) 	Agriculture (NS) and DTI (NB) (maintenance work), EOS (for education), Collaborative (collective “lobbying” to government for funding and to CN)	2014 onwards	<p>According to Mike Green, flood events have created more issues for the Dept of Agriculture’s infrastructure.</p> <p>Tide gauges, fish passages, etc further upstream also need work.</p> <p>DUC is spent \$40,000 to dredge the sediment build up in the Missiquash River to improve function of the aboiteau.</p> <p>More and more areas are silting up.</p> <p>CN pipes are also causing problems</p> <p>Precipitation changes are having an impact on the flow of water, silting, and maintenance costs.</p> <p>Need to educate the public on importance of dykes and ditches (not to block them)</p> <p>More information needed for freshwater/inland flooding.</p> <p>Public session on preparing for flooding in Tantramar took place on November 15th, 2014.</p>

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			Collaborative technical session on flooding took place February 2016.
Need to identify inland flood risks	SERSC		SERSC will have freshwater flood maps and scenarios available by 2020.
Authority for dykes in NB moved from Agriculture to DTI	Agriculture and DTI	Completed in 2016	
Hydro-technical study of Carter's Brook commissioned by DTI and Town of Sackville	Town of Sackville, DTI, Hilcon	Completed in 2016	Completed study looks at hard engineering (culverts, aboiteaux) and water flow
Explore and include ecosystem services in flood risk planning (wetlands, salt marshes, old growth forests, biodiversity, etc.)	Researches, U de M, Nature NB, SERSC, NGOs	2017 and beyond	Ecosystem services are a natural way of addressing flood risk, maintain natural features on the landscape such as wetlands, forests, etc.
Advocate for salt marshes in front of dykes	Researches, NGOs, etc.	2017 and beyond	Salt marshes offer a natural buffer to storm surges and flooding
Promote green infrastructure (rain gardens, storm water retention ponds, etc.)	Researches, U de M, Nature NB, SERSC, NGOs, Ducks Unlimited Canada, etc.	2017 and beyond	Constructed gardens and ponds can reduce localized flooding
Conduct a study to design the "dykes of the future"	NB DTI and NS Agriculture	2017 and beyond	Disaster mitigation funding has been confirmed
Communications/Education/Outreach/Engagement			
Goal: To communicate at the regional level that there are real risks but we can do something to prepare and keep safe			
Coordinate Collaborative and working group, plan annual workshops	EOS and Collaborative working group	ongoing	2017-2018 coordination and annual workshop are dependent on ETF application submitted by EOS.
Form Communications Committee	EOS	Formed in early 2013	Committee has formed. New volunteers take part each year. The committee helps to plan and organize Tantramar Climate Change Week and on-going work takes place such as workshops, information

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			sessions, information booths, PR, etc.
Host Annual Tantramar Climate Change Week	EOS and volunteer committee	Ongoing	5 successful CCWs so far! Climate Change Week 2018 dependent on ETF funding application submitted by EOS.
Develop communications pieces to inform the public (PSAs, etc).	EOS and partner municipalities and organizations	Ongoing	A variety of workshops held (on rain gardens, rain barrels, flood prep, emergency prep, adaptation, etc.), brochures mailed out about local climate impacts and adaptation options, newspaper articles, Storm Prep Tantramar Facebook group, etc.
Identify existing groups working on/interested in climate change (easy access points)	EOS	Early 2013	Was done back in 2013 and EOS will continue to add more groups, interested people
Work with local schools and summer camps	EOS and MTA classes	Ongoing	Annual visits to local schools with hands on activities dealing with climate change (both renewable energy and adaptation)
Added January 2014 for 2014/15 year: <ul style="list-style-type: none"> Plant rain gardens (EOS) Get a tidal gauge for Sackville 	EOS EOS, MTA, DTI, Town of Sackville	2014 and ongoing	<u>Rain gardens</u> : 14 planted across Tantramar <u>Tide gauge</u> : Liability issues prove challenging for installation
Increase social media likes/followers of EOS and of the Storm Prep Tantramar Facebook group	EOS and Collaborative Working Group	2017 and beyond	
Create a # hash tag for Twitter	EOS and Collaborative Working Group	2017 and beyond	
Put flood maps on display (have a painted mural in down town, etc.)	EOS, SERSC, local municipalities	2018	
Draw chalk lines for flood lines (put information in front of people)	EOS, CCW committee, local municipalities	2018	

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Brochures sent to ever home such as with water bills, or do door to door visits	Overseen by Collaborative working group in partnership with local communities	2018	
Keep an eye on provincial climate action plans and developments concerning education	EOS and Collaborative Working Group	2017 and beyond	
Tap into adaptation education resources (eg. NBDELG, Dr. Louise Comeau, Shawn Dalton, Melanie Aube, etc.)	EOS and Collaborative Working Group	2017 and beyond	During CCW 2017 EOS visited local schools to play a climate resilience card game (visit www.iclei.org to get a copy)
Offer presentations on adaptation and flood risk to local organizations like Rotary Club, etc.	EOS and Collaborative Working Group	2017 and beyond	
Expand the adaptation communication/awareness/ message more broadly to the larger public on social media with messaging aimed at how people can adapt in their home, property, workplace, transportation, etc. with a strong focus on what action personal actions people can take to adapt.	EOS and Collaborative Working Group	2017-2022	
Explore the creation or assistance with a Climate Change curriculum that would be delivered in schools – communicating with Raissa, Louise Comeau, and Shawn Dalton who is doing a literature search and scoping on Climate Change Education/Outreach would be beneficial in order to align efforts on this topic.	EOS and Collaborative Working Group	2018-2022	
Mentoring neighbouring organizations/community groups (e.g. Vision H2O, Shediac Bay Watershed Association, Moncton area group(s)) with the intent to create other regional collaboratives (this could be an ETF project)	EOS and Collaborative Working Group	2018-2022	
Support the Regional Service Commission and neighbouring municipalities of Greater Moncton in identifying vulnerabilities to	EOS and Collaborative Working Group	2018-2022	

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critical infrastructure across their territories as a step towards completing their Climate Action Plan or Adaptation Plan (potential ETF project)			
Work with natural resource sector to identify the most climate vulnerable species, habitats, landscapes, as targets for adaptation, while encouraging habitat connectivity for species migration, and biodiversity.	EOS, naturalist and natural resource groups	2019-2022	
Work with the agricultural community to bring adaptation into this sector (e.g. riparian buffer program, erosion reduction, runoff management, dealing with extreme weather events, new crops, etc.)	EOS and agriculture groups	2019-2022	
Work with citizens to encourage citizen science especially those keeping diaries or tracking weather events	EOS	2017-2022	EOS is hoping to create a Tantramar watershed committee and begin a water monitoring program (pending ETF funding for 2017-2018)
Survey citizens as to what actions they are taking to increase their resiliency and adapt to CC - in order to promote individual actions that can be easily undertaken that collectively increase a community's resilience	EOS	2020-2022	
Once provincial flood scenario mapping is available, use this base layer to create an interactive map (with assistance with assistance of RSC GIS specialist) populated with locations/individuals/infrastructure most at risk and the wide array of adaptation actions/installations/measures that are in place in the region. Interactive map would rely on users to build it better by identifying /mapping location / providing description of items at risks they know of. Good way to	EOS, SERSC, Collaborative Working Group	2020-2022	

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spruce up a website and engage citizens to contribute (quasi Citizen Science approach). The mapping exercise could provide impetus to continue with adaptation work at the local and regional level, and inform gov't, regional service commission, stakeholders, sectors, etc. about what is at risk and what resources or adaptations are in place. Contact information for each item mapped would be valuable in identifying climate champions, etc.			
Create an Adaptation Rating Index that could be a friendly way of getting people engaged and communities competing for the title of 'Most Adapted Community of the Year'	EOS and Collaborative Working Group	2021-2022	
Gather and promote via seminar or demonstration event / activities that would reduce impacts to homeowners during a power outage – propane fireplace/stove, low amperage pellet stoves, generators, sump pump, backflow valve, emergency kits/plans, sentinel program, etc. Can also do this exercise with municipalities and communities.	EOS and Collaborative Working Group	2018-2022	
Track and report via social media activities such as additions of rain gardens etc. taking place in the communities.	EOS	Ongoing	
Highlight what sector and economic aspects /costs would be impacted by a major climate event	Collaborative Working Group	2017-2022	
Track and report on green jobs and economic spinoffs generated by adaptation	EOS and Collaborative Working Group	2018-2022	
Emergency Measures – added January 2014			
Goal: To improve emergency measures through regional collaboration			
Continue cross border (NS/NB) communication and collaboration	EMOs	2014 onwards	Ongoing improvements
Promote climate change adaptation, flood risks, Sentinel,	EMOs	2014 onwards	A second push for Sentinel resulted in

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and general disaster preparedness within communities			more people joining the program in Sackville. November 2014 public session on "Preparing for Flooding in Tantramar" event very popular.
Create an education/information kit regarding Sentinel (Sackville EMO, EOS, RCE)	Sackville EMO	Nov 2014	A sign up booth for Sentinel was at the fall public session on flooding Nov 2014.
Include EMO information and sentinel promotion during climate change week 2014 (EOS)	EMOs, EOS	Feb 2014	This was done.
Sackville is currently updating its EMO plan	EMO Sackville	2014	Ongoing updates and changes. It is a living plan. Resource directories were also developed in 2015 and additional emergency supplies stockpiled in Sackville.
Port Elgin EMO to create emergency preparation brochures, include winter storm scenarios in the village's community plan, create wood heat inventory (for winter power outages), and seek funding for generators.	Village of Port Elgin, EMO		Everything completed except for funding for generators.
Dorchester to create new EMO committee and update its EMO plan	Ben Edgett, EMO coordinator, Village of Dorchester	2017-2018	New EMO coordinator in place
Identification of shared risks with NB, NS, Sackville, Amherst, Cumberland, and Westmorland	EMOs	2017 and beyond	
Obtain and share specific weather forecasts for Tantramar region as its weather is unique (different from Amherst and Moncton)	EMOs	2017 and beyond	
Expand the EMO sub group of the Collaborative to include Red Cross, Fire, Police, Environment Canada, ANB/EMS, and PEI EMO	EMO representatives on Collaborative and EOS as coordinator	2017	Lead agencies for all 6 groups should form emergency management sub group

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Mass notification interoperability (currently different systems used across the region)	EMOs, municipalities	2017 and beyond	
Research			
Goal: To keep up to speed on latest research on climate change impacts and adaptation			
Search out latest adaptation related research, stay on top of latest techniques, approaches, etc.	Collaborative working group	Ongoing	
Share latest research within Collaborative (ie via reports, emails, annual workshop, etc.)	Collaborative working group	Ongoing	
Funding			
Goal: To have the funds to continue the important work of the Collaborative and member groups			
Need funding for actions/programs	Collaborative members	Ongoing	EOS and other groups awaiting funding for the new fiscal year.
Support for at-risk community members	Collaborative members	Ongoing	Fall 2014 public session was aimed at the public and trying to attract those most vulnerable. Bulk purchases of emergency kits and backwater valves aimed to reduce costs and support vulnerable residents.
Funding to maintain infrastructure	Collaborative members	Ongoing	Groups awaiting word of new federal infrastructure funding. Sackville awarded funding for Lorne St. upgrades (2016). NB DTI awarded funding for “dykes of the future” study (2016).